



# Large-Scale Solar Applications to Mitigate PM<sub>2.5</sub> Pollution and Yellow Dust Storm in East Asia

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Venue: Conference Room, 3/F, Mong Man Wai Building

Registration: [Click Here](#)



## *Abstract*

We propose several grand ideas to apply large-scale solar systems to mitigate PM<sub>2.5</sub> pollution and yellow dust storm in East Asia. The first idea employs a solar-assisted large-scale cleaning system (SALSCS) to mitigate PM<sub>2.5</sub> pollution in urban air (Cao et al., *Aerosol and Air Quality Research* 15:1-10, 2015). The system combines a solar updraft tower with a filter bank to remove PM<sub>2.5</sub> pollutants. The second idea involves erecting a long chain of windbreak walls equipped with solar panels in the proximity of yellow dust storm origins (Pui et al., *Particuology* 13: 146-150, 2014). They will serve in a similar function as tree rows serving as wind-breakers but many times taller than the trees. A third topic (not related to solar application) is a collaboration project with Sun Kwok of HKU and Chak Chan of HKUST. We propose to install a Freeway Air Cleaning System (FACS) to draw vehicle emissions from the freeway and filter them with an industrial dust collector. The clean air is returned back to the freeway to reduce the exposure of the drivers and passengers, and residents near the freeway, from breathing the vehicle emissions, particularly during a rush-hour traffic.

~ All are Welcome! ~